

BEFORE THE  
**Federal Communications Commission**  
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MB Docket No. 87-268
and Their Impact upon the	)	
Existing Television Broadcast Service	)	

To: The Commission

**REPLY COMMENTS**

Davis Television Clarksburg, LLC (“Davis Clarksburg”), the licensee of Television Station WVFX(TV) and the permittee of WVFX-DT, Clarksburg, West Virginia (Facility ID No. 10976), by its attorneys, hereby replies to the Comments submitted by the West Virginia Educational Broadcasting Authority (“WVEBA”), the licensee of WSWP-TV and the permittee of WSWP-DT, Grandview, West Virginia, in connection with the Seventh Further Notice of Proposed Rule Making (“Seventh FNPRM”) issued by the Commission in the above-captioned proceeding (FCC 06-150).

In the Seventh FNPRM, the Commission proposed a new DTV Table of Allotments that provides all eligible television stations a DTV channel for post-transition operation. In addition, Appendix B to the Seventh FNPRM identifies the specific technical facilities with which stations would be allowed to operate post-transition. WSWP-DT has been issued a tentative channel designation on DTV Channel 10, and is tentatively authorized to operate with an effective radiated power (“ERP”) of 2.5 kW at an antenna height above average terrain of 314 meters. In its Comments, WVEBA requested that the Commission increase WSWP-DT’s allotted ERP from 2.5 kW to 20 kW. Because operation of WSWP-DT at 20 kW ERP will result in interference to WVFX-DT in excess of the 0.1% interference standard,

WVEBA has requested a waiver of that interference standard. Davis Clarksburg hereby opposes that waiver request because the proposed 20 kW ERP for WSWP-DT exceeds the ERP necessary to replicate WSWP-TV's analog service area, and the operation of WSWP-DT at 20 kW will cause substantially more interference to WVFX-DT than claimed by WVEBA.

On November 5, 2005, WVEBA certified to the FCC that it would operate WSWP-DT post-transition based on the station's allotted replication facilities. FCC File No. BCERET-20041105AFL. In the third round of the FCC's DTV channel election process, WVEBA elected to operate WSWP-DT on DTV Channel 10. FCC File No. BTREET-20060526AAZ. The FCC awarded WVEBA a tentative channel designation on that channel, but reduced WSWP-DT's ERP to 2.5 kW in order to meet the FCC's 0.1% interference standard. *Public Notice*, Third Round of the DTV Channel Election Process: Tentative Channel Designations, 21 FCC Rcd 9572 (2006) at n.5.

WVEBA claims that its proposed power increase is necessary to enable WSWP-DT to more fully replicate the population coverage achieved by WSWP-TV. Specifically, WVEBA asserts that WSWP-TV currently serves 906,075 persons based on 2000 U.S. Census population data, and that the operation of WSWP-DT at 20 kW will enable the station to replicate service to nearly all of that population. Comments at 3-4. However, as explained in greater detail in the attached Engineering Statement prepared by Bernard R. Segal, P.E., Davis Clarksburg's consulting engineer, WVEBA has substantially overstated its present analog population coverage by ignoring the fact that a substantial portion of that population does not receive actual service due to terrain obstructions or interference. Engineering Statement at 3.

According to the Commission, the replication service or coverage area of a DTV allotment “is the predicted noise-limited service area, contained within the Grade B contour of the NTSC station associated with that allotment, less any area where interference from other DTV or NTSC operations may occur.” *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Sixth Report & Order, 12 FCC Rcd 14588, 14607 (1997). Actual service provided within that Grade B contour is calculated using the Longley-Rice prediction methodology, whereby terrain and interference losses are taken into consideration to determine which cells within the station’s noise-limited contour that receive a signal strength above the threshold level. Engineering Statement at 2 (explaining the process employed by the FCC in Appendix B to the Sixth Report and Order in MM Docket No. 87-268). Using this methodology, the FCC determined in 2004 that WSWP-TV’s NTSC service population, based on 2000 U.S. Census data, is 517,443 (within an area of 21,637.9 square kilometers) (*Public Notice*, DTV Channel Election Information and First Round Election Filing Deadline, DA 04-3922 (released December 21, 2004) at Table I), which is substantially less than the 906,075 persons claimed by WVEBA.

WVEBA’s principal justification for increasing WSWP-DT’s ERP to 20 kW is that the increase in power is necessary to enable the station to more fully replicate its analog service area. As the foregoing makes clear, however, WSWP-TV presently provides service to less than 60% of the population it claims as its replication population base. As a consequence, WVEBA should not be permitted to increase its ERP to 20 kW.

Even if, assuming *arguendo*, WVEBA had a legitimate claim to file for its 20 kW facility, it has nevertheless failed to justify a waiver of the 0.1% interference standard. Indeed, WVEBA has significantly understated the extent to which that proposed facility

would interfere with WVFX-DT. In its Comments, WVEBA claims that WSWP-DT operating at 20 kW is predicted to increase the existing interference to WVFX-DT by 3,214 people, resulting in 0.7% interference to WVFX-DT. However, Davis Clarksburg's consulting engineer has determined, based on the methodology utilized by the FCC, that the proposed facility in fact would result in new interference to 8,506 persons within the station's service area, representing 1.4% of the 589,000 reference population for WVFX-DT.

Engineering Statement at 3 & Table 1.


As further evidence that grant of WVEBA's proposed power increase and waiver request would not be in the public interest, Davis Clarksburg has determined that a commercially available, off the shelf antenna could be employed that would enable WSWP-DT to exceed its legitimate replication population coverage target of 517,443 while at the same time comply with the of 0.1% interference standard toward WVFX-DT. As described in greater detail in the attached Engineering Statement, if WVEBA utilized a Dielectric Model THV-C170 antenna at a maximum ERP of 15kW (with no change in proposed rotation), WSWP-DT would provide net service to 567,285 persons in a service area of 21,118 square kilometers. Engineering Statement at 3-4.

WVEBA's proffered justification for its proposed eight-fold power increase for WSWP-DT collapses upon an examination of the facts. WSWP-TV does not presently provide analog service to 906,075 persons, and therefore cannot use that figure as its population coverage target for replication purposes. In addition, the proposed WSWP-DT facility at 20 kW will cause substantially more interference to WVFX-DT than claimed by WVEBA. In light of Davis Clarksburg's demonstration that a commercially available, off the shelf antenna is available that will allow WSWP-DT to replicate its properly calculated

replication area without violating the FCC's 0.1% interference standard, Davis Clarksburg respectfully requests that the FCC deny WVEBA's request for waiver of that standard and its underlying request to increase WSWP-DT's ERP to 20 kW

Respectfully submitted,

DAVIS TELEVISION CLARKSBURG, LLC

By:   
Dennis P. Corbett  
John D. Poutasse

Leventhal Senter & Lerman PLLC  
2000 K Street, N.W. Suite 600  
Washington, DC 20006-1809  
(202) 429-8970

February 26, 2007

Its Attorneys

BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

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ENGINEERING STATEMENT  
IN SUPPORT OF REPLY COMMENTS  
BY DAVIS TELEVISION CLARKSBURG, LLC  
MB DOCKET NO. 87-268

The instant Engineering Statement has been prepared on behalf of Davis Television Clarksburg, LLC (hereafter, Davis) in support of Reply Comments to the Comments of the West Virginia Educational Broadcasting Authority (hereafter, WVEBA) in the MB Docket No. 87-268, Seventh Further Notice of Proposed Rule Making (hereafter, Seventh Notice) proceeding.

WVEBA seeks to have the FCC modify the proposed allotment of Channel 10 with maximum effective radiated power (ERP) of 2.5 kW and height above average terrain of 314 meters for its Station WSWP-DT, Grandview, West Virginia, to specify a maximum ERP of 20 kW. As part of the proposal, WVEBA seeks a waiver of the 0.1 % maximum permissible interference limit toward co-channel Station WVFX-DT, Clarksburg, West Virginia. Davis is the permittee of Station WVFX-DT, and opposes the waiver request.

The stated purpose for the sought for service improvement is to better replicate the service currently provided by the WSWP-TV, Channel 9 NTSC facility. In order to do so, WVEBA claims that interference to WVFX-DT in excess of the 0.1 % maximum limit that has been mandated for the allotment purposes of the Seventh Further Notice, is required.

In support of its request, WVEBA submits various studies, identified as Exhibits A-1 and A-2 that compare WSWP-TV's noise-limited NTSC Grade B [56 dBu, F(50,50)] contour for its licensed Channel 9 operation with the WSWP-DT noise-limited 36 dBu, F(50,90) contours for the FCC proposed 2.5 kw allotment and the WVEBA proposed 20 kW allotment. However, these contour comparison studies are presented without regard to the losses that are, or would be, incurred as a result of terrain obstructions and interferences from other stations. WVEBA, then, claims that the entire populations within

BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

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these depicted contours are "served" populations. In this manner, WVEBA seeks to establish a population base of 906,075 persons for its licensed Channel 9 operation as the touchstone for a claim for service replication parity for its 20 kW proposal.

The FCC described the process that it employed in implementing the original Table of DTV Allotments in Appendix B of the Sixth Report and Order in MM Docket No. 87-268, released April 21, 1997. A coverage area replication process for the new DTV channel was established using the station's NTSC Grade B contour as the basis for coverage area replication. Then, the actual service provided within the NTSC noise-limited, Grade B, contour was determined, and the extent of service replication on the DTV channel was calculated. For the determinations of service provided, the Longley-Rice prediction methodology was employed to establish those cells within the noise-limited contour that received signal strength above the noise threshold level, taking into account both terrain and interference losses. The provision of service within the noise-limited contour is the basis for determining service replication.

As part of the Public Notice of December 21, 2004, DA 04-3922, the FCC attached a "Table I of Station Assignment and Service Information, December 21, 2004". This Table I, based on 2000 Census data, was to be used for the development of the final Table of DTV allotments. On page 65 of this Table I, the FCC provided service replication population and area information for WSWP-TV on NTSC Channel 9 and on DTV Channel 53. The WSWP-TV, Channel 9, NTSC service population, based on the 2000 Census, was listed as 517,443 persons in an area of 21,637.9 km<sup>2</sup>. The corresponding values for Channel 53 were 557,661 persons in an area of 21,263.9 km<sup>2</sup>.

If WVEBA has been deemed to have implemented STA service that achieves at least 80 % population coverage provided by the Ch. 53 allotment in Table I, then the listed 557,661 persons in 21,263.9 km<sup>2</sup> may be the target values for service replication on Channel 10.

BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

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In any event, the Table I service values are the appropriate targets for service replication consideration for WSWP-DT on Channel 10. The 906,075 persons claimed to be residing within the noise-limited contour for the present WSWP-TV, Channel 9, operation are irrelevant for service replication consideration purposes, since not all these persons are served by WSWP-TV, nor would they be served by WSWP-DT.

Figure 1 is a comparison tabulation of populations and areas that would be served by WSWP-DT and WVFX-DT, both on Channel 10, for various modes of operation for WSWP-DT. The 20 kW maximum ERP proposal by WVEBA for WSWP-DT would cause new interference to WVFX-DT affecting 8,506 persons in 604 km<sup>2</sup>. This interference represents 1.4 % of the 589,000 person reference population for WVFX-DT. In return, WSWP-DT would provide net service to 651,325 persons in 24,218 km<sup>2</sup>. On balance, WVEBA would achieve net service to 120,459 more persons in 2,063 km<sup>2</sup> than to which it could reasonably lay claim to under FCC procedures, at the expense of considerable interference to WVFX-DT.

The undersigned has determined that if a Dielectric, Model THV-C170, antenna at a maximum power level of 15 kW is employed for WSWP-DT, Channel 10, instead of the Dielectric, Model THV-C140, antenna at a power level of 20 kW, and with the same rotation as for the Model THV-C140 antenna, compliance with the requisite maximum permitted interference criterion of 0.1 % toward WVFX-DT could be achieved, while yet providing net service for WSWP-DT on Channel 10 to 567,285 persons in 21,118 km<sup>2</sup>. The service population for this mode of operation would exceed the 517,443 persons served by WSWP-TV, Channel 9, according to the aforementioned Table I list of December 21, 2004. The area that would be served, 21,118 km<sup>2</sup>, is comparable to the Table I value of 21,637.9 km<sup>2</sup>.

Similarly, if the Table I population of 557,661 persons and 21,263.9 km<sup>2</sup> area values for the Channel 53 operation of WSWP-DT are used as the thresholds for



BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

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comparison, the suggested use of the Model THV C170 antenna at a power level of 15 kW would provide service replication without exceeding the 0.1 % interference limit to Station WVFX-DT.

The example provided by the undersigned does not represent the only alternative configuration that is available to WVEBA. It merely illustrates that compliance with the FCC's 0.1 % interference limitation is possible, while, still, affording WVEBA the prospect for achieving enhanced service for WSWP-DT on Channel 10. With additional suppression of the pattern null toward WVFX-DT, ERP greater than 15 kW could be achieved without violating the FCC's 0.1 % increased interference limitation toward WVFX-DT.

For an apples to apples comparison with the FCC's results, the FCC's standard 1 km terrain sampling interval and 2 km cell size have been employed throughout by the undersigned. The studies made have been on a Sunblade computer using the FCC's TV Interference and Spacing Analysis Program. Figure 1 is a comparison of results obtained for the various WSWP-DT, Channel 10, operating modes that have been discussed. Figure 2 is the Dielectric, Model THV-C170, antenna pattern that was employed for the proffered alternative configuration for WSWP-DT.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 23, 2007.

*Bernard R. Segal, P.E.*  
Bernard R. Segal, P. E.



BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

Figure 1

POPULATION AND AREA SUMMARIES  
FOR WSWP-DT, GRANDVIEW, WV  
CHANNEL 10 DTV PROPOSALS

	WSWP-DT OPERATING MODE					
	FCC		WVEBA		DAVIS	
	C140*		C140*		C170*	
	2.5 kW		20 kW		15 kW	
	Pop.	Area (km <sup>2</sup> )	Pop.	Area (km <sup>2</sup> )	Pop.	Area (km <sup>2</sup> )
<u>WSWP-DT</u>						
Within noise-limited contour	577,887	20,078	848,931	29,127	776,633	25,548
Not affected by terrain losses	471,308	17,250	668,366	25,044	589,908	21,860
Lost due to DTV interference	35,696	706	17,041	826	22,623	742
Net service	435,612	16,544	651,325	24,218	567,285	21,118
FCC result for "Net Service"	435,000	16,544				
<u>WVFX-DT</u>						
Within noise-limited contour	731,402	25,498	731,402	25,498	731,402	25,498
Not affected by terrain losses	595,295	23,057	595,295	23,057	595,295	23,057
Lost due to IX w/o WSWP-DT (% IX)	4,446 (0.8)	109	4,446 (0.8)	109	4,446 (0.8)	109
Lost due to IX w/WSWP-DT (% IX)	5,448 (0.9)	270	12,952 (2.2)	713	5,402 (0.9)	258
New IX from WSWP-DT (% IX)	1,002 (0.1)	161	8,506 (1.4)	604	956 (0.1)	149
Net service with WSWP-DT	589,847	22,787	582,343	22,344	589,893	22,799
FCC result for "Net Service"	589,000	22,787				

Notes: The population is based on the 2000 Census.

The \* denotes the Dielectric, THV, antenna model employed in the calculation with the pattern oriented 197° clockwise from the pattern shown in the Dielectric catalog.

Call Letters  
Location  
Customer  
Antenna Type

**WSWP-DT** Channel **10**  
**GRANDVIEW, WV**

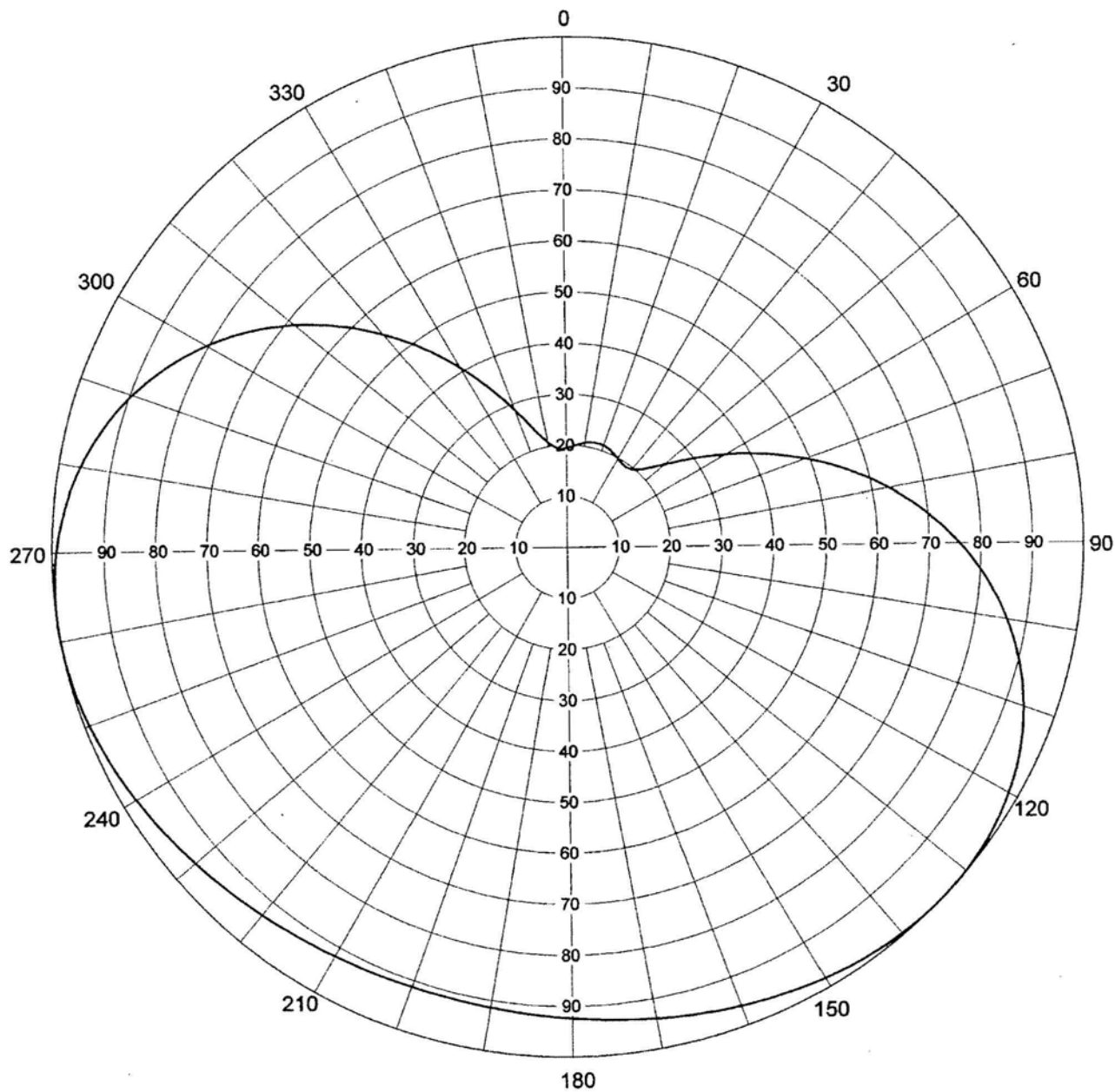
## AZIMUTH PATTERN

Gain  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**

Frequency  
Drawing #

**195 MHz**  
**THV-C170**



Remarks:

Call Letters **WSWP-DT** Channel **10**  
Location **GRANDVIEW, WV**  
Customer  
Antenna Type

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **THV-C170**

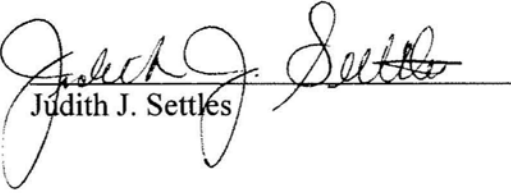
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.194	45	0.214	90	0.759	135	1.000	180	0.924	225	0.942	270	0.991	315	0.618
1	0.195	46	0.220	91	0.771	136	0.999	181	0.923	226	0.944	271	0.989	316	0.605
2	0.196	47	0.226	92	0.782	137	0.999	182	0.921	227	0.946	272	0.987	317	0.591
3	0.197	48	0.233	93	0.793	138	0.998	183	0.920	228	0.948	273	0.984	318	0.577
4	0.199	49	0.240	94	0.804	139	0.997	184	0.919	229	0.950	274	0.981	319	0.563
5	0.200	50	0.249	95	0.814	140	0.996	185	0.918	230	0.952	275	0.978	320	0.549
6	0.202	51	0.257	96	0.824	141	0.995	186	0.917	231	0.954	276	0.974	321	0.535
7	0.203	52	0.267	97	0.834	142	0.994	187	0.917	232	0.956	277	0.971	322	0.521
8	0.205	53	0.276	98	0.844	143	0.993	188	0.916	233	0.958	278	0.967	323	0.507
9	0.206	54	0.287	99	0.853	144	0.991	189	0.915	234	0.960	279	0.963	324	0.492
10	0.207	55	0.297	100	0.862	145	0.990	190	0.915	235	0.963	280	0.958	325	0.478
11	0.209	56	0.309	101	0.871	146	0.988	191	0.914	236	0.965	281	0.953	326	0.464
12	0.210	57	0.320	102	0.880	147	0.987	192	0.914	237	0.967	282	0.948	327	0.450
13	0.211	58	0.332	103	0.888	148	0.985	193	0.913	238	0.969	283	0.943	328	0.437
14	0.211	59	0.344	104	0.896	149	0.983	194	0.913	239	0.971	284	0.937	329	0.423
15	0.212	60	0.357	105	0.904	150	0.981	195	0.913	240	0.973	285	0.931	330	0.409
16	0.212	61	0.369	106	0.911	151	0.979	196	0.913	241	0.975	286	0.924	331	0.396
17	0.212	62	0.383	107	0.918	152	0.977	197	0.912	242	0.977	287	0.918	332	0.383
18	0.212	63	0.396	108	0.924	153	0.975	198	0.913	243	0.979	288	0.911	333	0.369
19	0.212	64	0.409	109	0.931	154	0.973	199	0.913	244	0.981	289	0.904	334	0.357
20	0.211	65	0.423	110	0.937	155	0.971	200	0.913	245	0.983	290	0.896	335	0.344
21	0.211	66	0.437	111	0.943	156	0.969	201	0.913	246	0.985	291	0.888	336	0.332
22	0.210	67	0.450	112	0.948	157	0.967	202	0.914	247	0.987	292	0.880	337	0.320
23	0.209	68	0.464	113	0.953	158	0.965	203	0.914	248	0.988	293	0.871	338	0.309
24	0.207	69	0.478	114	0.958	159	0.963	204	0.915	249	0.990	294	0.862	339	0.297
25	0.206	70	0.492	115	0.963	160	0.960	205	0.915	250	0.991	295	0.853	340	0.287
26	0.205	71	0.507	116	0.967	161	0.958	206	0.916	251	0.993	296	0.844	341	0.276
27	0.203	72	0.521	117	0.971	162	0.956	207	0.917	252	0.994	297	0.834	342	0.267
28	0.202	73	0.535	118	0.974	163	0.954	208	0.917	253	0.995	298	0.824	343	0.257
29	0.200	74	0.549	119	0.978	164	0.952	209	0.918	254	0.996	299	0.814	344	0.249
30	0.199	75	0.563	120	0.981	165	0.950	210	0.919	255	0.997	300	0.804	345	0.240
31	0.197	76	0.577	121	0.984	166	0.948	211	0.920	256	0.998	301	0.793	346	0.233
32	0.196	77	0.591	122	0.987	167	0.946	212	0.921	257	0.999	302	0.782	347	0.226
33	0.195	78	0.605	123	0.989	168	0.944	213	0.923	258	0.999	303	0.771	348	0.220
34	0.194	79	0.618	124	0.991	169	0.942	214	0.924	259	1.000	304	0.759	349	0.214
35	0.193	80	0.632	125	0.993	170	0.940	215	0.925	260	1.000	305	0.747	350	0.210
36	0.193	81	0.646	126	0.995	171	0.938	216	0.927	261	1.000	306	0.735	351	0.205
37	0.193	82	0.659	127	0.996	172	0.936	217	0.928	262	1.000	307	0.723	352	0.202
38	0.194	83	0.672	128	0.997	173	0.935	218	0.930	263	0.999	308	0.710	353	0.199
39	0.195	84	0.685	129	0.998	174	0.933	219	0.931	264	0.999	309	0.698	354	0.197
40	0.197	85	0.698	130	0.999	175	0.931	220	0.933	265	0.998	310	0.685	355	0.195
41	0.199	86	0.710	131	1.000	176	0.930	221	0.935	266	0.997	311	0.672	356	0.194
42	0.202	87	0.723	132	1.000	177	0.928	222	0.936	267	0.996	312	0.659	357	0.193
43	0.205	88	0.735	133	1.000	178	0.927	223	0.938	268	0.995	313	0.646	358	0.193
44	0.210	89	0.747	134	1.000	179	0.925	224	0.940	269	0.993	314	0.632	359	0.193

Remarks:

**CERTIFICATE OF SERVICE**

I, Judith J. Settles, certify that a true and correct copy of the foregoing Reply Comments were sent by first-class, postage prepaid mail this 26th day of February, 2007, to the following:

Kenneth E. Satten, Esq.  
Wilkinson Barker Knauer, LLP  
2300 N Street, N.W., Suite 700  
Washington, DC 20037  
*Counsel to West Virginia Educational Broadcasting Authority*

  
Judith J. Settles